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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/782,492 | 02/19/2004 | Roger W. Cox | 03-EDP-139 | 5667 |
| 7590 | 06/27/2005 | | EXAMINER | |
| Martin J. Moran, Esquire Eaton Electrical, Inc. Technology & Quality Center 170 Industry Drive, RIDC Park West Pittsburgh, PA 15275-1032 | | | VO, HIEN XUAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2863 | |
| DATE MAILED: 06/27/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/782,492 | COX, ROGER W. |
| | Examiner | Art Unit |
| | Hien X. Vo | 2863 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 February 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3 and 14-16 is/are rejected.
- 7) Claim(s) 4-13 and 17-20 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 19 February 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>02/19/04</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 02/19/04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 4 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4 (lines 5), the word "its" renders the claim indefinite because it is vague and indefinite what "its" refers to since no reference to relate thereto is recited.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 14-16 rejected under 35 U.S.C. 102(b) as being anticipated by Przydatek et al. (U.S. Patent No. 6,611,773).

With respect to claim 1, Przydatek et al. disclose the apparatus and method for measuring and reporting the reliability of a power distribution system with improved accuracy that includes repetitively determining values of a plurality of selected parameters of the electric power distribution system (see e.g. abstract), generating a composite power quality indicator from the values of the plurality of selected parameters (see e.g. col. 1, lines 55-59); and generating an output representing the composite power quality indicator (see e.g. col. 1, lines 61-67).

With respect to claims 2-3, Przydatek et al. disclose the invention as claimed including the composite power quality indicator comprises performing statistical analysis of the values of the plurality of selected parameters (see e.g. col. 9, lines 8-28), the composite power quality indicator comprises generating a power quality component for each of the plurality of selected parameters and combining the power quality components to produce the composite power quality indicator (see e.g. col. 1, lines 57-60).

With respect to claim 14, Przydatek et al. disclose the invention as claimed including the sensors for sensing currents and voltages in the electric power distribution system, processing means comprising means for repetitively determining values of selected parameters from the currents and voltages and for statistically generating a composite power quality indicator from the values of the selected

parameters (see e.g. col. 4, lines 18-21, 35-38, col. 7, lines 41-55 and col. 8, lines 3-9); and output means providing a representation of the composite power quality indicator (see e.g. col. see e.g. col. 1, lines 61-67).

With respect to claims 15-16, Przydatek et al. disclose the invention as claimed including the processing means comprises means generating power quality components from the values of the selected parameters and combining the power quality components to generate the composite power quality indicator (see e.g. col. 1, lines 57-60), means generating a long-term mean of the composite power quality indicator and the output means comprises a display displaying the composite power quality indicator relative to the long-term mean of the composite power quality indicator (see e.g. col. 14, lines 65-67).

Allowable Subject Matter

6. Claims 4-13, 17-20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

For claims 4-13, none of the prior art teach singularly or in combination the composite power quality indicator comprises assigning each power quality component an associated weighting factor selected to produce a selected weighting of the power

quality component, multiplying each power quality component by its associated weighting factor to generate the power quality component and adding the weighted power quality components to generate the power quality index, the selected weighting by establishing a power quality component sensitivity for each of the plurality of selected parameters and multiplying the power quality component by the power quality component sensitivity and the associated weighting factor, quality component sensitivity comprises maintaining a long-term mean value for each power quality component and a long-term mean value for the composite power quality indicator, and multiplying the associated weighting factor by a ratio of the composite power quality indicator long-term mean value to the power quality component long-term mean value, updating each power quality component sensitivity by multiplying a most recent power quality component sensitivity by the associated weighting factor and the ratio of the composite power quality indicator long-term mean to the power quality component long-term mean, generating at least one dynamic threshold for the composite quality indicator by generating a standard deviation of the long-term mean of the composite power quality indicator and generating the at least one dynamic threshold as a function of the standard deviation, and generating the output comprises generating a representation of the composite power quality indicator relative to the long-term mean of the composite power quality indicator and relative to the at least one dynamic threshold, generating the at least one dynamic threshold comprises generating a long-term mean of the composite power quality indicator, generating a standard deviation of the long-term mean of the composite power quality indicator and generating the at least one dynamic

threshold as a function of the standard deviation, and generating the output comprises generating a representation of the composite power quality indicator relative to the long-term mean of the composite power quality indicator as well as relative to the at least one dynamic threshold, generating a moving average of the composite power quality indicator over a selected time period, generating a first moving average of the composite power quality indicator over a first time period and generating a second moving average of the composite power quality indicator over a second time period which is a multiple of the first time period, and generating the composite power quality indicator using only the first moving average until the method has been employed for the second time period and thereafter generating the composite quality indicator using the second moving average.

For claims 17-20, none of the prior art teach singularly or in combination the means generating a standard deviation of the long-term mean of the composite power quality indicator and at least one dynamic threshold as a function of the standard deviation, and the display further displays the composite power quality indicator relative to the at least one dynamic threshold, means generating a first dynamic threshold as a first function of the standard deviation and a second dynamic threshold as a second function of the standard deviation that is greater in value than the first function of the standard deviation, and wherein the display displays the first and second dynamic thresholds relative to the long-term mean of the composite power quality indicator to define a safe zone for the composite power quality indicator between the long-term mean of the power quality indicator and the first dynamic threshold, a caution zone

between the first and second dynamic thresholds, and an alert zone farther from the long-term mean of the composite power quality indicator than the second dynamic threshold, means generating power quality components from values of the selected parameters, means providing a selected weighting of each power quality component by applying a selected weighting factor to that power quality component to generate weighted power quality components, and means combining the weighted power quality components to generate the composite power quality indicator, means maintaining the weighting of each power quality component by applying a continually adjusted sensitivity to each weights power quality component derived from the long-term mean of the composite power quality indicator and a long-term mean of the power quality component.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien X. Vo whose telephone number is (571) 272-2282.

The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hien Vo
06/13/05



John Barlow
Supervisory Patent Examiner
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